

WHAT IS CLAIMED IS:

1. A pavement marking comprising:

a binder having polyurea groups, wherein the binder is prepared from a coating composition comprising:

- 5 one or more aliphatic secondary amines;
 one or more polyisocyanates; and
 material selected from the group of fillers, extenders, pigments, and combinations thereof; and
 reflective elements.

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2. The pavement marking of claim 1 wherein the pavement marking has a retained reflectivity of at least about 100 mcd/m²/lux after at least about 2 years in use as longitudinal traffic markings as measured according to ASTM E 1710-95.

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3. The pavement marking of claim 1 wherein the one or more aliphatic secondary amines comprises an aspartic ester amine.

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4. The pavement marking of claim 1 wherein the coating composition has a minimum application temperature of at least about 7°C and a track-free time of no greater than about 5 minutes.

5. The pavement marking of claim 1 wherein the reflective elements comprise ceramic microspheres.

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6. The pavement marking of claim 1 wherein the coating composition is substantially free of volatile organic components.

7. The pavement marking of claim 1 wherein the coating composition has an open time of at least about 30 seconds.

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8. The pavement marking of claim 1 wherein the filler comprises hollow glass microspheres.
9. The pavement marking of claim 1 comprising material selected from the group of fillers, extenders, pigments, and combinations thereof in an amount of at least about 15 weight percent, based on the weight of the final dried coating.
10. The pavement marking of claim 9 comprising material selected from the group of fillers, extenders, pigments, and combinations thereof in an amount of about 30 weight percent to about 42 weight percent, based on the weight of the final dried coating.
11. A pavement marking comprising a binder having polyurea groups, wherein the binder is prepared from a sprayable, two-part coating composition substantially free of volatile organic components and comprising an amine component comprising one or more aspartic ester amines and an isocyanate component comprising one or more polyisocyanates; wherein:
- at least one of the amine component and the isocyanate component further comprises material selected from the group of fillers, extenders, pigments, and combinations thereof; and
- the coating composition has a minimum application temperature of at least about 7°C and a track-free time of no greater than about 5 minutes.
12. The pavement marking of claim 11 which has a retained reflectivity of at least about 100 mcd/m²/lux after at least about 2 years in use as longitudinal traffic markings as measured according to ASTM E 1710-95.
13. A coating composition comprising:
- one or more aliphatic secondary amines;
- one or more polyisocyanates; and

material selected from the group of fillers, extenders, pigments, and combinations thereof; and

wherein the coating composition has a minimum application temperature of at least about 7°C, a track-free time of no greater than about 5 minutes, and forms a pavement marking having reflective elements with a retained reflectivity of at least about 100 mcd/m²/lux after at least about 2 years in use as longitudinal traffic markings as measured according to ASTM E 1710-95.

14. The coating composition of claim 13 wherein the one or more aliphatic secondary amines comprise a secondary amine-functional polymer.

15. The coating composition of claim 13 wherein the one or more aliphatic secondary amines comprise an aspartic ester amine.

16. The coating composition of claim 13 which has a minimum application temperature of at least about -4°C.

17. The coating composition of claim 13 which is substantially free of volatile organic components.

18. The coating composition of claim 13 which has an open time of at least about 30 seconds.

19. The coating composition of claim 13 wherein the filler comprises hollow glass microspheres.

20. The coating composition of claim 13 comprising material selected from the group of fillers, extenders, pigments, and combinations thereof in an amount of at least about 15 weight percent, based on the weight of the final dried coating.

21. The coating composition of claim 20 comprising material selected from the group of fillers, extenders, pigments, and combinations thereof in an amount of about 30 weight percent to about 42 weight percent, based on the weight of the final dried coating.

22. A sprayable two-part liquid pavement marking composition comprising:
an amine component comprising one or more aspartic ester amines and optionally one or more amine-functional coreactants, and
an isocyanate component comprising one or more polyisocyanates;
wherein:

the amine component, the isocyanate component, or both further comprise material selected from the group of fillers, extenders, pigments, and combinations thereof;

the pavement marking composition is sprayable, and has a minimum application temperature of at least about 7°C and a track-free time of no greater than about 5 minutes.

23. The two-part liquid pavement marking composition of claim 22 wherein the amine-functional coreactant is an amine-functional polymer.

24. The two-part liquid pavement marking composition of claim 22 further comprising reflective elements.

25. The two-part liquid pavement marking composition of claim 24 wherein the reflective elements comprise ceramic microspheres.

26. A traffic bearing surface having thereon the pavement marking of claim 1.

27. A traffic bearing surface having thereon the pavement marking of claim 11.

28. A pre-formed pavement marking comprising a substrate having coated thereon the pavement marking of claim 11.

29. A method of preparing a pavement marking, the method comprising:

5 providing an amine component comprising one or more aliphatic secondary amines;

providing an isocyanate component comprising one or more polyisocyanates;

10 providing material selected from the group of fillers, extenders, pigments, and combinations thereof in either the amine component, the isocyanate component, or both;

combining the amine component and the isocyanate component to form a coating composition having a minimum application temperature of at least about 7°C, and a tack-free time of no greater than about 5 minutes;

15 applying the coating composition to a surface; and

applying reflective elements to the composition coated on the surface to form a pavement marking having reflective elements with a retained reflectivity of at least about 100 mcd/m²/lux after at least about 2 years in use as longitudinal traffic markings as measured according to ASTM E 1710-95.

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30. The method of claim 29 wherein the surface is a traffic bearing surface.

31. The method of claim 29 wherein the pavement marking further comprises reflective elements.

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32. The method of claim 31 wherein the reflective elements are applied to the composition coated on the traffic bearing surface.

33. The method of claim 29 wherein the step of applying the coating composition comprises spraying the coating composition.

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34. The method of claim 29 wherein the amine and isocyanate components are combined in a volume ratio of about 2:1 amine to isocyanate.

5 35. The method of claim 29 wherein the amine and isocyanate components are combined in a volume ratio of about 3:1 amine to isocyanate.

36. A method of marking a traffic bearing surface, the method comprising:
providing an amine component comprising one or more aspartic ester
amines and optionally one or more amine-functional coreactants;
10 providing an isocyanate component comprising one or more
polyisocyanates;
providing material selected from the group of fillers, extenders, pigments,
and combinations thereof in either the amine component, the isocyanate
component, or both;
15 combining the amine component and the isocyanate component to form a
coating composition having a minimum application temperature of at least about
7°C, and a tack-free time of no greater than about 5 minutes;
spraying the coating composition onto a traffic bearing surface; and
applying reflective elements to the composition coated on the traffic
20 bearing surface to form a pavement marking.